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EXAMINER	
WOZNIAK, JAMES S	
ART UNIT	**PAPER NUMBER**
2655	

DATE MAILED: 05/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/812,524	Applicant(s) FREY ET AL.	
	Examiner James S. Wozniak	Art Unit 2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _10 December 2004_.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-57_ is/are pending in the application.

4a) Of the above claim(s) _34_ is/are withdrawn from consideration.

5)☒ Claim(s) _33 and 35-40_ is/are allowed.

6)☒ Claim(s) _1-32 and 41-57_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _20 March 2001_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _6/27/2002_.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. In response to the office action from 9/29/2004, the applicant has submitted an amendment, filed 12/10/2004, amending Claims 3, 15, 21, and 31-32, while canceling claim 34 and arguing to traverse the art rejection based on the limitation regarding generated mixture components and a revised speech vector *(Amendment, Pages 15-16)*. Applicant's arguments have been fully considered, however the previous rejection is maintained due to the reasons listed below in the response to arguments.

2. Based on the amendments to Claims 3 and 15, the examiner has withdrawn the previous 35 U.S.C. 112 Second Paragraph rejection directed towards a lack of antecedent basis.

3. The IDS from 6/27/2002 has been considered.

Response to Arguments

4. Applicant's arguments have been fully considered but they are not persuasive for the following reasons:

With respect to **Claims 1 and 25**, the applicant argues that Erell et al (U.S. Patent: 5,148,489) fails to teach mixture components for a prior probability describing combination of

clean signal feature vectors with obscuring feature vectors (Amendment, Page 15). The examiner notes that it is the noisy speech signal probability taught by Erell that anticipates this claim limitation since it consists of noise and clean speech portions *(Col. 5, Lines 36-67, Equations 1-3)*. Erell further teaches that a clean speech signal is identified using the noisy speech signal probability. Thus, since Erell teaches a noisy speech probability containing clean speech and noise portions, Claims 1 and 25 remain rejected.

Claims 2-14 and 26-31 are argued as further limiting rejected independent claims 1 and 25, and thus, also remain rejected.

With respect to **Claim 41**, the applicant argues that Yamaguchi et al *(U.S. Patent: 6,026,359)* fails to teach the step for determining a revised value for a component of a clean signal feature vector *(Amendment, Page 16)*. The examiner directs the applicant to Equation 10 in Yamaguchi wherein C_R, which contains clean speech as per Equation 6, is modified by a Jacobian matrix, thus obtaining a modified version of the clean speech in the presence of noise. The examiner further notes that although the scope of the current claim language can be read upon by the teachings of Yamaguchi, an amendment regarding the equation utilized by the present invention in order to determine the revised value for a component of the clean signal feature vectors may differentiate the claimed invention from Yamaguchi, and thus, overcome the prior art of record.

Claims 42-48 are argued as further limiting rejected independent claim 41, and thus, also remain rejected.

With respect to **Claim 15**, the applicant argues that Erell fails to teach determining the intersections of distributions of obscuring feature vectors with distributions of clean signal

feature vectors. The examiner directs the applicant to Col. 7, Line 36- Col. 8, Line 22, wherein the overlapping regions of acoustic space taught by Erell would include speech and noise and speech is identified by utilizing an intersection of noisy speech with clean speech from a particular region. Also, see the arguments with respect to Claim 1. Thus, Claim 15 remains rejected.

Claims 16-24 are argued as further limiting rejected independent claim 15, and thus, also remain rejected.

The applicant's arguments with respect to **Claim 32** are convincing and the claim is allowable over the prior art of record for those reasons given below in the reasons for allowance section.

Claims 33 and 35-40 are argued as further limiting allowable independent claim 15, and thus, are also allowable over the prior art of record.

With respect to **Claim 49**, see the response directed towards Claim 41

Claims 50-57 are argued as further limiting rejected independent claim 49, and thus, also remains rejected.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 1-6, 14, 25-27, 29, and 30** are rejected under 35 U.S.C. 102(b) as being anticipated by Erell et al *(U.S. Patent: 5,148,489)*.

With respect to **Claim 1**, Erell discloses:

Generating at least two mixture components for a prior probability describing combinations of clean signal feature vectors with obscuring feature vectors *(generating mixture models describing clean speech in the presence of noise, Col. 5, Lines 35-67)*; and

Using each mixture component of the prior probability and the noisy signal feature vector to identify the clean signal feature vector *(estimating a clean speech feature vector, Col. 5, Lines 35-67)*.

With respect to **Claim 2**, Erell recites:

One obscuring feature vector is a noise feature vector *(noisy speech feature vector, Col. 5, Lines 35-67)*.

With respect to **Claim 3**, Erell discloses:

Generating a separate mixture component for the intersection of each noise feature vector with distributions of clean signal feature vectors *(mixture components representing overlapping regions of acoustic space, Col. 7, Line 36- Col. 8, Line 22)*.

With respect to **Claim 4**, Erell recites:

Generating a separate mixture component for each intersection of a distribution of noise feature vectors with a distribution of clean signal feature vectors *(mixture components representing overlapping regions of acoustic space, Col. 7, Line 36- Col. 8, Line 22)*.

With respect to **Claim 5**, Erell recites:

The distribution of noise feature vectors is approximated as a Gaussian distribution *(Col. 8, Lines 39-43)*.

With respect to **Claim 6**, Erell discloses:

Generating a separate mixture component for each intersection of a mixture component of the mixture of distributions for the noise feature vectors with a distribution of clean signal feature vectors *(mixture components representing overlapping regions of acoustic space, each utilizing a noise probability distribution, Col. 7, Line 36- Col. 8, Line 22, and Col. 5, Line 35- Col. 6, Line 25)*.

With respect to **Claim 14**, Erell discloses:

Identifying the clean signal feature vector comprises using algorithms obtained through an approximate Bayesian inference technique to identify the clean feature vectors *(Col. 5, Lines 60-67)*.

With respect to **Claim 25**, Erell recites:

Identifying a mixture of distributions that provide prior probabilities for combinations of clean signal feature vectors and obscuring feature vectors *(generating mixture models describing clean speech in the presence of noise, Col. 5, Lines 35-67)*;

Determining an observation variance to associate with the noisy signal feature vector *(variance associated with noise, Col. 6, Line 25- Col. 7, Line 35)*; and

Using the prior probability mixture of distributions and the observation variance to identify the clean signal feature vector (detecting speech in the presence of noise, *Col. 5, Line 35- Col. 7, Line 35)*.

With respect to **Claim 26**, Erell discloses:

Determining an observation variance comprises using a closed-form expression to determine the variance *(Col. 6, Lines 28-67)*.

With respect to **Claim 27**, Erell recites:

Generating an observed noisy signal feature vector from a noisy signal that is the combination of at least the clean signal and the noise signal *(observed noise coefficients, Col. 6, Lines 1-67)*;

Calculating a calculated noisy signal feature vector from the feature vector from the clean signal and the feature vector from the noise signal *(vector describing speech in the presence of noise, Col. 4, Line 61- Col. 5, Line 17, that would require an inherent step of generating separate speech and noise vectors, and an expected noise coefficient, Col. 6, Lines 1-67)*;

Comparing the observed noisy signal feature vector to the calculated noisy signal feature vector to determine the variance *(variance calculation, Col. 6, Lines 1-67)*.

Claim 29 contains subject matter similar to Claim 1, and thus, is rejected for the same reasons.

Claim 30 contains subject matter similar to Claim 2, and thus, is rejected for the same reasons.

7. **Claims 41 and 43-48** are rejected under 35 U.S.C. 102(b) as being anticipated by Yamaguchi et al (U.S. Patent: 6,026,359).

With respect to **Claim 41**, Yamaguchi discloses:

Accessing a distribution of training feature vectors that represents a prior probability of combinations of training feature vectors *(accessing initial noisy speech HMMs containing output probability distribution vectors, Col. 11, Lines 23-56, and Col. 10, Lines 24-44)*;

Setting an initial value for a component of a clean signal feature vector *(initial clean speech HMMs, Col. 11, Lines 23-37)*;

Determining a revised value for the component of the clean signal feature vector based in part on the initial value for the component, the distribution of training feature vectors, and the noisy signal feature vector *(updating a noisy speech HMM comprising clean speech and noise HMMs, Col. 11, Lines 23-56)*;

Determining whether to accept the revised value as a final value for the component *(judging whether an HMM update is necessary, Col. 16, Lines 30-43)*; and

Using the final value for the component to identify the clean signal feature vector *(using the updated HMM to recognize clean speech in noise, Col. 11, Lines 38-56)*.

With respect to **Claim 43**, Yamaguchi further discloses:

The steps of the method are repeated for a plurality of distributions of training feature vectors to generate a final value for a plurality of components of the clean signal feature vector *(adapting a plurality of speech HMMs having multiple states, Col. 11, Lines 38-56)*.

With respect to **Claim 44**, Yamaguchi recites:

Determining a revised value comprises determining a revised value based in part on a variance associated with the noisy signal feature vector *(updating a speech model based upon a difference between an initial and observed speech parameter, Col. 7, Lines 54- Col. 8, Line 5)*.

With respect to **Claim 45**, Yamaguchi discloses:

Accessing a distribution comprises accessing a distribution representing a mixture component of a mixture of distributions for noise training feature vectors *(output probability vector, Col. 10, Lines 40-54).*

With respect to **Claim 46**, Yamaguchi discloses:

The mixture component is described in part by a variance *(change in noise, Col. 10, Line 40- Col. 11, Line 15).*

With respect to **Claim 47**, Yamaguchi teaches the step of accessing a mixture component as applied to Claim 45, and additionally discloses:

Accessing a distribution representing a mixture component of a mixture of distributions for channel distortion training feature vectors *(Col. 14, Lines 16-23).*

Claim 48 contains subject matter similar to Claims 46 and 47, and thus, is rejected for the same reasons.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. **Claims 7-11, 13, 18, 19, 23, 28, 31, and 37-39** are rejected under 35 U.S.C. 103(a) as being unpatentable over Erell et al in view of Eberman et al *(U.S. Patent: 5,924,065).*

With respect to **Claim 7**, Erell teaches the method of estimating a clean speech feature vector from noise-degraded speech that utilizes mixture components, as applied to Claim 1. Erell does not specifically suggest the implementation of a similar method using channel distortion feature vectors in place of noise feature vectors, however, Eberman recites:

One obscuring feature vector is a channel distortion feature vector *(detecting a clean speech signal within a signal distorted by channel distortion, Col. 4, Line 58-Col. 6, Line 34)*.

Erell and Eberman are analogous art because they are from a similar field of endeavor in detecting speech in noise. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teaching of Erell with the use of a channel distortion vector in detecting a clean speech signal vector as taught by Eberman to improve the means of identifying and representing a clean speech signal by further considering channel distortion- a common and well-known speech degrading effect *(Eberman, Col. 1, Lines 32-49, and Col 3, Lines 61-67)*.

With respect to **Claim 8**, Erell teaches the mixture generation method as applied to Claim 3, while Eberman teaches the further use of a channel distortion vector in estimating a clean speech vector as applied to Claim 7.

With respect to **Claim 9**, Erell teaches the mixture generation method as applied to Claim 4, while Eberman teaches the further use of a channel distortion vector in estimating a clean speech vector as applied to Claim 7.

Claim 10 contains subject matter similar to Claim 5, and thus, is rejected for the same reasons.

With respect to **Claim 11**, Erell teaches the mixture generation method as applied to Claim 6, while Eberman teaches the further use of a channel distortion vector in estimating a clean speech vector as applied to Claim 7.

With respect to **Claim 13**, Erell teaches the method of estimating a clean speech feature vector from noise-degraded speech that utilizes mixture components, as applied to Claim 1, while Eberman teaches the further use of a channel distortion vector in estimating a clean speech vector as applied to Claim 7. Although neither Erell nor Eberman specifically suggest utilizing multiple channel distortion vectors corresponding to different channels, the examiner takes official notice that it is well known in the art to do so in order to detect a clean speech signal in a variety of channel distorted environments. Therefore, in order to implement improved clean speech detection in a variety of channel distortion environments, it would have been obvious to modify the teachings of Erell and Eberman with the use of multiple channel distortion vectors corresponding to different channels.

Claim 18 contains subject matter similar to Claim 7, and thus, is rejected for the same reasons.

Claim 19 contains subject matter similar to Claim 13, and thus, is rejected for the same reasons.

Claim 23 contains subject matter similar to Claims 7 and 22, and thus, is rejected for the same reasons.

Claim 28 contains subject matter similar to Claims 7 and 27, and thus, is rejected for the same reasons.

Claim 31 contains subject matter similar to Claim 7, and thus, is rejected for the same reasons.

10. **Claims 12, 15-17, 20-22, 24, 32-36, and 40** are rejected under 35 U.S.C. 103(a) as being unpatentable over Erell et al.

With respect to **Claim 12**, Erell teaches the method of estimating a clean speech feature vector from noise-degraded speech that utilizes mixture components, as applied to Claim 1. Erell does not specifically suggest that clean speech feature vectors are from at least two sources, however, the examiner takes official notice that it is well known in the art to utilize feature vectors from multiple sources in order to implement speaker dependent speech recognition. Therefore, in order to improve recognition accuracy for individual speakers through speaker dependent speech recognition, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the teachings of Erell with the use of clean speech feature vectors from multiple sources.

With respect to **Claim 15**, Erell recites:

A computer-readable medium comprising computer-executable instructions for performing steps comprising:

Determining the intersections of at least two distributions of obscuring feature vectors with at least one distribution of model clean signal feature vectors *(mixture components representing overlapping regions of acoustic space for multiple frequency channels, Col. 7, Line 36- Col. 8, Line 22)*;

Using the intersections to identify at least two mixture components for a probability distribution that describes the prior probability of combinations of obscuring feature vectors and clean signal feature vectors *(mixture components representing overlapping regions of acoustic space, Col. 7, Line 36- Col. 8, Line 22)*; and

Using the mixture components of the prior probability and the feature vector for the noisy signal to identify the feature vector for the clean signal *(estimating a clean speech feature vector, Col. 5, Lines 35-67)*.

Erell does not specifically suggest method storage on a computer readable medium, however, it would have been obvious to one of ordinary skill in the art, at the time of invention, to store the clean speech estimation method taught by Erell on a computer readable medium to increase method compatibility and usability by providing a means for method use with multiple computer systems.

Claim 16 contains subject matter similar to Claims 3 and 15, and thus, is rejected for the same reasons.

Claim 17 contains subject matter similar to Claim 2, and thus, is rejected for the same reasons.

Claim 20 contains subject matter similar to Claim 6, and thus, is rejected for the same reasons.

Claim 21 contains subject matter similar to Claim 5, and thus, is rejected for the same reasons.

With respect to **Claim 22**, Erell discloses:

At least two distributions of obscuring feature vectors comprise at least two distributions of noise feature vectors *(noise distributions for multiple frequency channels, Col. 6, Lines 1-24)*.

Claim 24 contains subject matter similar to Claim 12, and thus, is rejected for the same reasons.

With respect to **Claim 32**, Erell recites:

Accessing a noisy signal feature vector *(Col. 4, Line 61- Col. 5, Line 17)*;

Accessing at least one distribution of training feature vectors *(accessing a filter banking containing noisy speech vectors, Col. 4, Line 61- Col. 5, Line 17)*;

Determining a variance for the noisy signal feature vector *(variance calculation, Col. 6, Lines 1-67)*;

Identifying a clean signal feature vector from the noisy signal feature vector, the distribution of training feature vectors and the variance for the noisy signal feature vector *(detecting speech in the presence of noise, Col. 5, Line 35- Col. 7, Line 35)*.

Erell does not specifically suggest method storage on a computer readable medium, however, it would have been obvious to one of ordinary skill in the art, at the time of invention, to store the clean speech estimation method taught by Erell on a computer readable medium to increase method compatibility and usability by providing a means for method use with multiple computer systems.

11. **Claims 42 and 49-57** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al in view of Ramaswamy et al *(U.S. Patent: 6,188,976)*.

With respect to **Claim 42**, Yamaguchi teaches the clean speech model updating method as applied to Claim 41. Yamaguchi does not specifically suggest deciding not to update according to an initial model and then providing a further model update, however, the addition of such steps would have been obvious to one of ordinary skill in the art as is evidenced by Ramaswamy *(implementing an additional model update if an initial model is unacceptable, Col. 3, Line 64- Col. 4, Line 7)*.

Yamaguchi and Ramaswamy are analogous art because they are from a similar field of endeavor in speech model adaptation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Yamaguchi with the further steps of implementing an additional model update if a first update is considered to be unacceptable as taught by Ramaswamy to ensure that a clean speech vector is acceptable for use in a speech recognition process.

With respect to **Claim 49**, Yamaguchi discloses:

Accessing a noisy signal feature vector *(initial noise HMM, Col. 11, Lines 23-56, and Col. 10, Lines 24-44)*;

Accessing at least one distribution of training feature vectors *(initial clean speech HMM, Col. 11, Lines 23-56, and Col. 10, Lines 24-44)*;

Identifying an initial value for a clean signal feature vector *(initial clean speech HMM, Col. 11, Lines 23-56, and Col. 10, Lines 24-44)*; and

Although Yamaguchi teaches updating a speech HMM as applied to Claim 41, Yamaguchi does not teach an iterative process of further updating an altered speech vector,

however, Ramaswamy teaches such a function in implementing an additional model update if a model is determined to be unacceptable as applied to Claim 42.

Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Yamaguchi with the further steps of implementing an additional model update if a first update is considered to be unacceptable as taught by Ramaswamy to ensure that a clean speech vector is acceptable for use in a speech recognition process.

Claim 50 contains subject matter similar to Claim 44, and thus, is rejected for the same reasons.

Claims 51 and 53 contain subject matter similar to Claim 45, and thus, are rejected for the same reasons.

Claim 52 contains subject matter similar to Claim 46, and thus, is rejected for the same reasons.

Claims 54 and 56 contain subject matter similar to Claim 47, and thus, are rejected for the same reasons.

Claim 55 contains subject matter similar to Claim 48, and thus, is rejected for the same reasons.

With respect to **Claim 57**, Yamaguchi in view of Ramaswamy teaches the clean speech model updating method as applied to Claim 49. Although neither Yamaguchi nor Ramaswamy specifically suggest utilizing multiple channel distortion vectors corresponding to different channels, the examiner takes official notice that it is well known in the art to do so in order to detect a clean speech signal in a variety of channel distorted environments. Therefore, in order

to implement improved clean speech detection in a variety of channel distortion environments, it would have been obvious to modify the teachings of Yamaguchi and Ramaswamy with the use of multiple channel distortion vectors corresponding to different channels.

Allowable Subject Matter

12. **Claims 32-33 and 35-40** are allowable over the prior art of record.

13. The following is an examiner's statement of reasons for allowance:

Although Erell teaches the generation of noisy feature vectors, probability distributions associated with the noise vectors, and a calculation of an associated variance *(Col. 5-6)*, the prior art of record fails to explicitly teach or fairly suggest the method used to calculate the variance used in the presently claimed invention, wherein calculated and observed noisy signal feature vectors are compared utilizing equations 2-4 on pages 22-23 of the specification. The prior art of record also does not explicitly teach or fairly suggest the above method for noisy feature vector variance calculation in combination with a further step of identifying a clean speech signal feature vector from the noisy signal feature vector, the probability distribution of a training signal vector, and the variance calculated according to the equations 2-4 on pages 22-23 of the specification

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (703) 305-8669 and email is James.Wozniak@uspto.gov. The examiner can normally be reached on Mondays-Fridays, 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached at (703) 305-4827. The fax/phone number for the Technology Center 2600 where this application is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology center receptionist whose telephone number is (703) 306-0377.

James S. Wozniak
5/4/2005

David L. Ometz
DAVID L. OMETZ
PRIMARY EXAMINER